

Article Information Sheet (AIS)

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and others users requesting a GHS-compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria is not designed or intended to be used to classify the physical, health and environmental hazards of an article. Branded consumer batteries are defined as electro-technical devices. The design, safety, manufacture, and qualification of branded consumer batteries follow ANSI and IEC battery standards. This document is based on principles set forth in the following hazard communication approaches: ANSI Z-400.1, GHS, JAMP AIS, and IEC 62474.

1. Document Information					
Document Name	Duracell Alkaline Batteries (Major and Specialty Cells)				
Document ID	AIS-ALK				
Issue Date	1-May-15				
Version	1				
Preparer	Global Product Stewardship				
Last Revision	New				
Information Contact	moquet.l@pg.com				
2. Company Information					
Name & Address	P&G Duracell Global Business Unit, 14 Research Drive, Bethel, CT USA 06801				
Telephone	(203) 796- 4430				
Website	www.duracell. com				
Consumer Relations	North America: 1-800-551-2355 (9:00 AM - 5:00 PM EST)				
3. Article Information					
Description	Duracell branded consumer alkaline battery				
Product Category	Electro-technical device				
Use	Portable power source for electronic devices				
Global sub-brands (Retail)	Coppertop, Plus, Quantum, Simply, Turbo, Ultra, Basic, TurboMax				
Global sub-brands (B2B)	Procell, Industrial, OEM/OEA				
Sizes	Major Cells: AA,AAA, C, D & 9V				
Sizes	Specialty Cells: AAAA, MN11. MN21, MN27, MN175, PX76 (LR44), PX28, PX625, (LR09), LR43, LR54, N, J, 4.5V, 625A				
Sizes	Lanterns: MN903, MN908, MN915, MN918; MN1203				
Principles of Operation	A battery powers a device by converting stored chemical energy into electrical energy.				
Representative Product Images	   				
	Maior Cells		Maior Cells	Lantern	Specialty
4. Article Construction					
Applicable Battery Industry Standards	ANSI C18.1M Part 1, ANSI C18.1M Part 2, ANSI C18.4, IEC 60086,1, IEC 60086-2, IEC 60086-5				
Electro-technical System	Alkaline Manganese Dioxide				
Electrode - Negative	Zinc (CAS # 7440-66-6)				
Electrode - Positive	Manganese Dioxide (CAS # 1313-13-9)				
Electrolyte	Alkali Metal Hydroxide (aqueous potassium hydroxide - CAS # 1310-58-3)				
Materials of Construction - Can	Nickel Plated Steel				
Declarable Substances (IEC 62474 Criteria 1)	None				
Mercury Free Battery (ANSI C18.4M <50ppm)	Yes				
Small Cell or Battery (ANSI C18.1M Part 2; IEC 60086-5)	Sizes: AAA and Specialty Cells fit inside a specially designed test cylinder 2.25 inches (57.1mm) long by 1.25 inches (31.70 mm) wide.				
5. Health & Safety					

Article Information Sheet (AIS)

Ingestion/Small Parts Warning	<u>Required for Small Cell or Battery (Sizes: AAA and Specialty Cells):</u> Keep away from children. If swallowed, consult a physician immediately.
Normal Conditions of Use	Exposure to contents inside the sealed battery will not occur unless the battery leaks, is exposed to high temperatures, or is mechanically abused.
Note to Physician	A damaged battery will release concentrated and caustic potassium hydroxide.
First Aid - If swallowed	Do not induce vomiting. Seek medical attention immediately. USA CALLS ONLY - CALL 24-HOUR NATIONAL BATTERY INGESTION HOTLINE: (202) 625-3333 - COLLECT.
First Aid - Eye Contact	Flush with water for at least 15 minutes. Seek medical care if irritation persists.
First Aid - Skin Contact	Remove contaminated clothing. Wash skin with soap and water. Seek medical care if irritation persists.
First Aid - Inhalation	Remove to fresh air.
Battery Safety Standards & Testing	<p>Duracell batteries meet the requirements of ANSI C18. 1M Part 2 and IEC 60086-5. These standards specify tests and requirements for alkaline batteries to ensure safe operation under normal use and reasonably foreseeable misuse. The test regimes assess three conditions of safety. These are:</p> <p><u>1-Intended use simulation:</u> Partial use, vibration, thermal shock, and mechanical shock</p> <p><u>2-Reasonably foreseeable misuse:</u> Incorrect installation, external short-circuit, free fall (user-drop), over-discharge, and crush</p> <p><u>3-Design consideration:</u> Thermal abuse, mold stress</p>
Precautionary Statements	<p>CAUTION: Batteries may explode or leak, and cause burn injury, if recharged, disposed of in fire, mixed with a different battery type, inserted backwards or disassembled. Replace all used batteries at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label. Keep small batteries (i.e., AAA) away from children. If swallowed, consult a physician at once.</p>
6. Fire Hazard & Firefighting	
Fire Hazard	Batteries may rupture or leak if involved in a fire.
Extinguishing Media	Use any extinguishing media appropriate for the surrounding area.
Fires Involving Large Quantities of Batteries	Large quantities of batteries involved in a fire will rupture and release caustic potassium hydroxide. Firefighters should wear self-contained breathing apparatus and protective clothing.
7. Handling & Storage	
Handling Precautions	Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.
Storage Precautions	Store batteries in a dry place at normal room temperature. Refrigeration does not make them last longer.
Spills of Large Quantities of Loose Batteries (unpackaged)	Notify spill personnel of large spills. Irritating and flammable vapors may be released from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all ignition sources. Evacuate area and allow vapors to dissipate. Clean-up personnel should wear appropriate PPE to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in appropriate container for disposal. Remove any spilled liquid with absorbent material and contain for disposal.
8. Disposal Considerations (GHS Section 13)	
Collection & Proper Disposal	Dispose of used (or excess) batteries in compliance with federal, state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to short-circuit. Do not incinerate. In countries, such as Canada and the EU, where there are regulations for the collection and recycling of batteries, consumers should dispose of their used batteries into the collection network at municipal depots and retailers. They should not dispose of batteries with household trash.

Article Information Sheet (AIS)

USA EPA RCRA (40 CFR 261)	Classified as non-hazardous waste (not ignitable, corrosive, reactive or toxic). Federal Universal Waste Regulations (40 CFR 273) do not apply. State requirements may be more stringent than Federal.
California Universal Waste Rule (Cal. Code Regs. Title 22, Div. 4.5, Ch. 23)	California prohibits disposal of batteries as trash (including household trash).
9. Transport Information (GHS Section 14)	
Regulatory Status	Not regulated. Alkaline batteries (sometimes referred to as "Dry Cell" or "household" batteries) are not listed or regulated as dangerous goods under IATA Dangerous Goods Regulations, ICAO Technical Instructions, IMDG Code, UN Model Regulations, U.S. Hazardous Materials Regulations (49 CFR), and UNECE ADR.
UN Identification Number/Shipping Name	None - Not Required
Special Provision (SP) Conformance	Special regulatory provisions require batteries to be packaged in a manner that prevents the generation of a dangerous quantity of heat and short circuits. Shippers can prepare batteries by taping the terminals, individually packaging batteries, or otherwise segregating the batteries to prevent risk of creating a short circuit. Batteries shipped in original unopened Duracell packaging is compliant.
US DOT SP	49 CFR 172.102 Special Provision 130
Air Transport (IATA/ICAO) SP	Special Provision A123 (56th Edition - 2015). NOTE: The words "NOT RESTRICTED" and "SPECIAL PROVISION A123" must be included on the description of the substance on the Air Waybill, when air way-bill is issued.
Passenger Air Travel	No restrictions
Emergency Transportation Hotline	CHEMTREC 24-Hour Emergency Response Hotline Within the United States call +703-527-3887 Outside the United States, call +1 703-527-3887 (Collect)
10. Regulatory Information (GHS Section 15)	
10a. Battery Requirements	
USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996	During the manufacturing process, no mercury is added.
EU Battery Directive 2006/66/EC & amendment 2013/56/EU	Compliant with marking and substance restrictions for mercury (<0.0005%); cadmium (<0.0020%) and lead (<0.0040%). Global labels are marked with the special collection symbol and the EU qualifier in accordance with EU Battery Directive 2006/66/EC, Article 11. Paragraph 1 on batteries and accumulators and waste batteries and accumulators
10b. General Requirements	
USA CPSIA 2008 (PL. 11900314)	Exempt
USA CPSC FHSA (16 CFR 1500)	Consumer batteries are not listed as a hazardous product.
USA EPA TSCA Section 13 (40 CFR 707.20)	For customs clearance purpose, batteries are defined as an "Article".
USA EPA RCRA (40 CFR 261)	Classified as non-hazardous waste (not ignitable, corrosive, reactive or toxic). Federal Universal Waste Regulations (40 CFR 273) do not apply. State requirements may be more stringent than Federal.
California Prop 65	No warning required per 3rd party assessment.
CANADA Products Containing Mercury Regulations SOR/20140254	Mercury free
EU REACH SVHC's (161 Substances) Candidate List December 2014)	No listed substances are present (>0.01% w/w)
EU REACH Article 31	SDS is not required consumer alkaline batteries.

Article Information Sheet (AIS)

10c. Regulatory Definitions - Articles

USA OSHA	29 CFR 1910.1200(b)(6)(v)
USA TSCA	40 CFR 704.3; 710.2(3)(c); and [19 CFR 12.1209a]]
EU REACH	Title 1 - Chapter 2 - Article 3(3)
GHS	Section 1.3.2.1

11. Other Information

11a. Certification & 3rd Party Approvals

UL (UTGT2.S50939 Single Multiple Station Smoke Alarms - Component)	AA, 9V Certification Standard: ANSI/UL 217 Single & Multiple Station Smoke Alarms
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11b. AIS Hazard Communication Approaches (consulted in developing this document):

Globally Harmonized System (GHS)	GHS SDS requirements and classification criteria do not apply to articles or products (such as batteries) that have a fixed shape, which are not intended to release a chemical. The article exemption is found in Section 1.3.2.1.1 of the GHS and reads: <i>The GHS applies to pure substances and their dilute solutions and to mixtures. "Articles" as defined by the Hazard Communication Standard (29 CFR 1900.1200) of the OSHA of the USA, or by similar definition, are outside the scope of the system."</i>
Joint Article Management Promotion Consortium JAMP	JAMP is a Japanese Industry Association who developed the concept of an Article Information Sheet as a supply chain tool to share and communicate chemical information in articles. The AIS authoring process is based on "declarable" substances to meet global regulatory requirements as well as substances to be reported by GADSL, JIG, etc.
IEC 62474 Ed. 1.0 B:2012 Material Declaration for Products of and for the Electro-technical Industry	An international standard that came into effect in March 2012 concerning declaration for electrical and electronic products. IEC 6274 replaces the defunct Joint Industry Guide – Material Declaration for Electro-technical Products (JIG-101-Ed 4.1 (May 21, 2012)
IEC 62474 Database - Publically available online (maintained by TC11: Environmental Standardization for electrical and electronic products and systems.	The general principle for a substance to be included in the database as a declarable substance is: 1) existing national laws or regulations in an IEC member country that are relevant to Electro-technical products and that prohibit or restrict substances, or that have a labeling, communication, reporting or notification requirement, and 2) applying IEC 62474 criteria results in identification of declarable substance.
ANSI Z 400.1/Z19.1 (2010)	2.1 Scope: Applies to preparation of SDSs for hazardous chemicals used under occupational conditions. Does not address how the standard may be applied to articles. It presents basic information on how to develop and write a SDS. Additional information is provided to help comply with state and federal environmental and safety laws and regulations. Elements of the standard may be acceptable for International use.

DISCLAIMER: This AIS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations. This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.

SAFETY DATA SHEET

Date of issue 23-07-2019

Canada/English

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Li-ion rechargeable battery CMICR18650F5 2200mAh

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended Use Rechargeable Li-ion battery

Uses advised against No information available

Details of the supplier of the safety data sheet

Initial supplier identifier DongGuan Cham Battery Technology Co.,Ltd.

Address No.9 Third West Industry Road, Songshan Lake High-Tech Industrial Development Zone, DongGuan

Telephone +86 0769 2383 6666

E-mail guanxiaomei@cham.com.cn

Emergency telephone number

Company Emergency Phone Number +86 0769 2383 6666

2. HAZARDS IDENTIFICATION

Classification

This is a battery. In case of rupture:

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements

This is a battery. In case of rupture:.

Causes skin irritation
Causes serious eye irritation
Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure



Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Very toxic to aquatic life with long lasting effects

Unknown acute toxicity 30.9 % of the mixture consists of ingredient(s) of unknown toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Percent (%)	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Cobalt lithium manganese nickel oxide	182442-95-1	41.7	-	-
Polyvinylidene fluoride resin	24937-79-9	0.8	-	-
Carbon	7440-44-0	19.5	-	-
Aluminum	7429-90-5	4.2	-	-
Copper	7440-50-8	10.0	-	-
Polypropylene	9003-07-0	5.3	-	-
Lithium hexafluorophosphate	21324-40-3	3.3	-	-
Ethylene carbonate	96-49-1	4.0	-	-
Dimethyl carbonate	616-38-6	3.7	-	-
Nickel	7440-02-0	7.0	-	-
Styrene-Butadiene Rubber (SBR)	9003-55-8	0.3	-	-
Carboxymethyl cellulose	9000-11-7	0.2	-	-

4. FIRST AID MEASURES

First aid measures

General advice	First aid is upon rupture of sealed battery. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
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Aluminum 7429-90-5	TWA: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 1.0 mg/m ³	TWA: 1 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³
Copper 7440-50-8	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ TWA: 0.2 mg/m ³	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³
Phosphate(1-), hexafluoro-, lithium 21324-40-3	TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection

Wear suitable gloves. Impervious gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid
Appearance	No information available
Odor	No information available
Color	No information available
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	0	

Autoignition temperature	No data available	None known
Decomposition temperature	None known	
Kinematic viscosity	None known	
Dynamic viscosity	None known	
Explosive properties	No information available.	
Oxidizing properties	No information available.	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information In case of rupture:
Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). Irritating to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Information on toxicological effects

Symptoms	Redness. May cause redness and tearing of the eyes.
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Numerical measures of toxicity

Unknown acute toxicity 30.9 % of the mixture consists of ingredient(s) of unknown toxicity
30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Irritating to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients. Contains a known or suspected carcinogen.

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Copper	96h EC50: 0.031 - 0.054 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.0426 - 0.0535 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 0.0068 - 0.0156 mg/L (Pimephales promelas) 96h LC50: = 1.25 mg/L (Lepomis macrochirus) 96h LC50: = 0.052 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.2 mg/L (Pimephales promelas) 96h LC50: < 0.3 mg/L (Pimephales promelas)	-	48h EC50: = 0.03 mg/L

		96h LC50: = 0.112 mg/L (Poecilia reticulata) 96h LC50: = 0.3 mg/L (Cyprinus carpio) 96h LC50: = 0.8 mg/L (Cyprinus carpio)		
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Persistence and Degradability No information available.

Bioaccumulation

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

Note: The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule)
Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

TDG Not regulated

DOT NOT REGULATED
Proper Shipping Name NON-REGULATED
Hazard Class N/A
Emergency Response Guide Number 147

MEX Not regulated

ICAO Not regulated

IATA Not regulated
Proper Shipping Name NON REGULATED
Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class	N/A
EmS-No.	F-A, S-I

<u>RID</u>	Not regulated
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<u>ADR</u>	Not regulated
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<u>ADN</u>	Not regulated
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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 0	Flammability 0	Physical hazards 0	Personal Protection X

Prepared By	Guangzhou CP-UP Certification Technology Service Co., Ltd.
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Issuing Date	23-07-2019
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Revision Note	No information available
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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless

specified in the text

End of Safety Data Sheet

Inhalation Statement

Not Hazardous

Hazard statements

Signal word

Precautionary Statements

dust

This is a battery. In case of rupture:

Causes damage to organs through prolonged or repeated exposure

Danger

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P321 - Specific treatment (see supplemental first aid instructions on this label) P332 + P313 - If skin irritation occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/ container to an approved waste disposal plant

Danger

Category 2

Causes skin irritation

Warning

Category 2A

Causes serious eye irritation

Warning

Category 2

Suspected of causing cancer

Warning

Category 1

Signal word

Skin corrosion/irritation

Hazard statements

Signal word

Serious eye damage/eye irritation

Hazard statements

Signal word

Carcinogenicity

Hazard statements

Signal word

Specific target organ toxicity (repeated exposure)

Skin corrosion/irritation

Serious eye damage/eye irritation

Carcinogenicity

STOT - repeated exposure

STOT - repeated exposure

- (H315)

- (H319)

- (H351)

- (H372)

Graphic



Graphic



Graphic



Hazard statements	Causes skin irritation Causes serious eye irritation Suspected of causing cancer Causes damage to organs through prolonged or repeated exposure
Hazard statements	H315 - Causes skin irritation H319 - Causes serious eye irritation H351 - Suspected of causing cancer H351 - Suspected of causing cancer H372 - Causes damage to organs through prolonged or repeated exposure H372 - Causes damage to organs through prolonged or repeated exposure
Precautionary Statements - EU (§28, 1272/2008)	P103 - Read label before use P280 - Wear face protection P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish P234 - Keep only in original container P303 - IF ON SKIN (or hair):
Precautionary Statements	IF ON SKIN: Wash with plenty of water and soap IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention If skin irritation occurs: Get medical advice/attention Take off contaminated clothing And wash it before reuse Take off contaminated clothing and wash it before reuse Take off contaminated clothing And wash it before reuse Take off contaminated clothing and wash it before reuse IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention If eye irritation persists: Get medical advice/attention Obtain special instructions before use Obtain special instructions before use Do not handle until all safety precautions have been read and understood Do not handle until all safety precautions have been read and understood Wear protective gloves Wear protective gloves IF exposed or concerned: Get medical advice/attention IF exposed or concerned: Get medical advice/attention Store locked up Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product Get medical advice/attention if you feel unwell Get medical advice/attention if you feel unwell
Skin	IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse
Precautionary Statements	P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P321 - Specific treatment (see supplemental first aid instructions on this label) P332 + P313 - If skin irritation occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/ container to an approved waste disposal plant
Precautionary Statements - Prevention	Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product
Precautionary Statements - Response	IF exposed or concerned: Get medical advice/attention Specific treatment (see supplemental first aid instructions on this label)
Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention
Skin	IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse
Precautionary Statements - Storage	Store locked up
Precautionary Statements - Disposal	Dispose of contents/container to an approved waste disposal plant
Contains lithium	
Unknown acute toxicity	90.77 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Unknown Acute Aquatic Toxicity	90.77
Unknown Chronic Aquatic Toxicity	90.77
Product ATE Oral Status	1
Product ATE Dermal Status	1
Product ATE Inhalation - Gas Status	1
Product ATE Inhalation - Vapor Status	1
Product ATE Inhalation - Dust/Mist Status	1
Product Skin Corrosion Status	1
Product Eye Damage Status	1

Product Respiratory Sens. Status	1
Product Skin Sensitization Status	1
Product Mutagenic Status	1
Product Carcinogenic Status	1
Product Reproductive Toxicity Status	1
Product STOT Single Status	1
Product STOT Repeated Status	1
Product Aquatic Toxicity Status	1
Product Aspiration Toxicity Status	1
Product Ozone Status	1
Product and Component Overall Classification Status	1
STOT - repeated exposure	- (H372)
Unknown acute toxicity	30.9 % of the mixture consists of ingredient(s) of unknown toxicity
	30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
	30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
	30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
	30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
	30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
Symbols/Pictograms	
Symbols/Pictograms	
Other hazards	Very toxic to aquatic life with long lasting effects
Health hazards	Skull and Crossbones
Health hazards	Exclamation mark
Inhalation Statement	dust
Health hazards	1
